

erit partium 1216373 $\frac{1}{2}$, & singulis horis area illa erit partium 50682 $\frac{1}{2}$. Sin latus rectum majus sit vel minus in ratione quavis, erit area diurna & horaria major vel minor in eadem ratione subduplicata.

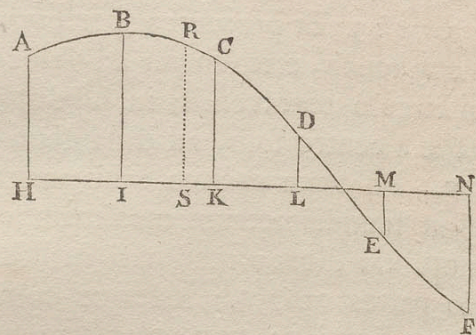
LEMMA V.

Invenire lineam curvam generis parabolici, quæ per data quotcunque puncta transibit.

Sunto puncta illa A, B, C, D, E, F , &c. & ab iisdem ad rectam quamvis positione datam HN demitte perpendiculara quotcunque AH, BI, CK, DL, EM, FN .

Caf. 1. Si punctorum H, I, K, L, M, N æqualia sunt intervalla HI, IK, KL , &c. collige perpendicularorum AH, BI, CK , &c. differentias primas $b, 2b, 3b, 4b, 5b$, &c. secundas $c, 2c, 3c, 4c$, &c. tertias $d, 2d, 3d$, &c. id est, ita ut sit $AH-BI=b, BI-CK=2b, CK-DL=3b, DL+EM=4b, -EM+FN=5b$, &c. dein $b=$

$b \quad 2b \quad 3b \quad 4b \quad 5b$
 $c \quad 2c \quad 3c \quad 4c$
 $d \quad 2d \quad 3d$
 $e \quad 2e$
 f



$2b=c$, &c. & sic pergatur ad differentiam ultimam, quæ hic est f . Deinde erecta quacunq; perpendiculari RS , quæ fuerit ordinatim applicata ad curvam quæsitam: ut inveniatur hujus longitudo, pone intervalla HI, IK, KL, LM , &c. unitates esse, & dic $AH=a, -HS=p, \frac{1}{2}p$ in $-IS=q, \frac{1}{3}q$ in $+SK=r, \frac{1}{4}r$ in $+SL=s, \frac{1}{5}s$ in $+SM=t$; pergendo videlicet ad usque penultimum perpendicularum ME , & præponendo signa negativa terminis HS, IS , &c. qui jacent

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jacent ad partes puncti S versus A , & signa affirmativa terminis SK, SL , &c. qui jacent ad alteras partes puncti S . Et signis probe observatis, erit $RS=a+b p+c q+d r+e s+f t$, &c.

Caf. 2. Quod si punctorum H, I, K, L , &c. inæqualia sint intervalla HI, IK , &c. collige perpendicularorum AH, BI, CK , &c. differentias primas per intervalla perpendicularorum divisas $b, 2b, 3b, 4b, 5b$; secundas per intervalla bina divisa $c, 2c, 3c, 4c$, &c. tertias per intervalla ternaria divisas $d, 2d, 3d$, &c. quartas per intervalla quaternaria divisas $e, 2e$, &c. & sic deinceps; id est, ita ut sit $b=\frac{AH-BI}{HI}, 2b=\frac{BI-CK}{IK}, 3b=\frac{CK-DL}{KL}$, &c. dein $c=\frac{b-2b}{HK}, 2c=\frac{2b-3b}{IL}, 3c=\frac{3b-4b}{KM}$, &c. postea $d=\frac{c-2c}{HL}, 2d=\frac{2c-3c}{IM}$, &c. Inventis differentiis, dic $AH=a, -HS=p, p$ in $-IS=q, q$ in $+SK=r, r$ in $+SL=s, s$ in $+SM=t$; pergendo scilicet ad usque perpendicularum penultimum ME , & erit ordinatim applicata $RS=a+b p+c q+d r+e s+f t$, &c.

Corol. Hinc area curvarum omnium inveniri possunt quamproxime. Nam si curvæ cujuscvis quadrandæ inveniatur puncta aliquot, & parabola per eadem duci intelligatur: erit area parabolæ hujus eadem quamproxime cum area curvæ illius quadrandæ. Potest autem parabola per methodos notissimas semper quadrari Geometrice.

LEMMA VI.

Ex observatis aliquot locis cometæ invenire locum ejus ad tempus quodvis intermedium datum.

Designent HI, IK, KL, LM tempora inter observationes (in fig. præced.) HA, IB, KC, LD, ME observatas quinque longitudes cometæ, HS tempus datum inter observationem primam & longitudinem quæsitam. Et si per puncta A, B, C, D, E duci intelligatur curva regularis $ABCDE$; & per lemma superius inveniatur ejus ordinatim applicata RS , erit RS longitudo quæsitæ.

Eadem methodo ex observatis quinque latitudinibus invenitur latitudo ad tempus datum.

Si